156907

MONSANTO

From: Gordon A. Grundmann CS6G Corporate Engineering (4-6112)

Date: January 23, 1985

Subj: Pre-Job Conference

Re: CEA 3808 - Main S. Trunk Sewer

TO:

W. Bodine	Alberici
T. Carrico	1740
W. Franke	Pennwalt
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M.A. Coco	Alberici
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A pre-job conference was held at the construction trailers at 9:00 a.m. on 01/22/85 to discuss membranes and acid brick details for the manholes on the project. Most of the details discussed in the meeting are part of the project specifications and are not covered in this memo. The details summarized below primarily cover additional clarification or emphasis on portions of the specifications:

A. Cast In-Place Concrete Manholes

1. Sheppard noted that it is often worthwhile to check the actual chute operator at the concrete supplier to ensure they are furnishing the proper mix.

2. Any voids that can be seen visually in the concrete surface need to be repaired prior to membrane installation. The patch mix per the specifications is 2-parts sand to 1-part Portland cement. (The mix stated in the meeting was not per the specifications).

3. All of the moisture must be out of the concrete walls before applying the membrane. This is also true after hydro test.

B. Asphalt Membrane System

1. Apply when the temperature is over 40°F.

2. The hot asphalt is approximately 360°F during application. This presents a burn hazard which means that safety measures must be taken here.

WGK 4084791

3. A primer is first applied over the entire surface. It is important that the surface be thoroughly covered.

4. The layers of asphalt are applied from the bottom up. The squeegee used is usually wood or masonite.

5. The fiberglass cloth is applied starting at the top.

6. The asphalt thickness is 1/4". The reason for not getting too great a thickness of asphalt is that the material has the capability to flow and could break the bond of the bricks at some future time.

C. Furan Resin Membrane System

1. The furan and substrate must be 60°F minimum regardless of the air temperature.

2. A maximum of 80°F for installation is suggested because the working life of the furan above this temperature gets very short.

3. The white glass sheathing cloth must be worked into the mortar until it is entirely black (the color of the mortar).

4. Curing times are specified, but work should not proceed if a knife point can be pushed into the furan. If it can, then the furan has not completed its curing.

D. Acid Brick

1. The surface temperature of the brick must be 60°F minimum. This means pallets of brick must be restacked after receiving in a checker-board fashion to ensure that the inner bricks are at the proper temperature. Ventilation is required under the brick so it does not absorb moisture from the ground. The guideline temperature for laying brick is 60°-80°F. The mortar temperature has the same guidelines. If the temperature is above 80°F up to a maximum of 90°F, the bricklayer must lay the brick very quickly and this increases the risk of the mortar hardening before the bricks can be properly laid.

2. Monsanto will furnish the power for heating and refrigerating units to either heat or cool the brick as required.

3. When mixing the furan, mix the power into the liquid to avoid lumping (as opposed to the reverse). Spread mortar out to prevent deep mixes or there is the ultimate possibility of the mix catching on fire.

4. When a brick is placed, mortar must be extruded all around. This ensures full joints.

5. Bricks are not all that uniform, and the bricklayer must choose his bricks to obtain the nominal 1/8" thick joint.

6. After the brick is installed, 8-days of curing at 70°F are required.

7. Double-buttering is required on the brickwork.

8. The joint design recommended by R. Knoll has been accepted. Knoll to resubmit drawings for approval.

E. General

1. All materials to be used for the membranes and brickwork have been approved.

2. It was clearly stated that all this work must be executed strictly in accordance with the specifications. Any revisions must be cleared and approved by Monsanto.

3. R. Knoll intends to use the same personnel for the entire project. This would include: Rich Schlereth of Fleischer Seeger who will periodically check the progress of the job, a brick foreman (on the job all the time), one or two bricklayers, and a laborer.

4. The next seminar, which will be held specifically for the craftsmen who will do the work, is expected to take place in early March.

5. Sheppard is sending Grundmann inspection guidelines which will be distributed.

F. Furan Joints on 42" Pipe

1. Cannot hydro test prior to total curing. If water penetrates the furan, it will stop the cure.

2. Shutdown of work in the trench due to benzene safety concerns caused concern over the curing of two joints. Curing will start if the pipe itself (not just the air) is at 55°-60°F. It is okay to restart a cure if it has to be stopped.

If a cure never did start because of too low a temperature, and more than four-days elapses, then the joint must be redone since the furan will not ultimately reach proper strength after a delay of this length of time. The two joints questioned were at sufficient temperature when the work was shut down due to benzene safety concerns, and they are okay since the cure had started. Loss of bonding is the concern with starting the cure too late. If you could scrape the furan off the pipe with a knife, then the bonding was improper.

3. Alberici is considering placing a bag enclosure around the outside of the pipe to localize the heating. Guidelines were established. Ideally the temperature inside the pipe and outside should be the same. A 10°F differential is acceptable. More than 10°F differential up to 20°F absolute maximum is marginally acceptable, but not recommended. Sheppard suggested the possible use of tarps over the pipe alongside the joints to help minimize the loss of heat through the pipe walls.

Gordon A. Grundmann

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mb/0048C

MONSANTO

From: Gordon A. Grundmann CS6G Corporate Engineering (4-6112)

Date: January 18, 1984

Subj: Project Progress Meetings

Re: CEA 3808 - Main South Trunk Sewer

TO:

T.N.	Carrico	1740*
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C.J.	Lotz	Alberici*
R.L.	Nelson	1740*
K.W.	Petterson	1740*
O.N.	Shipley	1740
T.W.	Wright	CS6G

cc:

D.R.	Bowers	CS6G
L.V.	Bumbicka	1740
R.M.	Calles	CS6G
M.A.	Coco	Alberici
R.J.	Geile	CS6G
E.R.	Hartman	CS6G
P.R.	Hoemann	1740
L.C.	Kreh	F2ED
F.A.	Mayse	CS6G
R.J.	Murphy	1740
R.L.	Wiese	CS6G

*Present at meeting

Following are minutes of the meeting held at the CED construction trailers on 01/18/85 at 9:00 a.m.

1. Construction Progress

a. The plant supplier of benzene had a pipeline freezeup which prevented the unloading of benzene by barge. Temporarily, the benzene is being shipped into the plant by truck and unloaded at the storage tank near the construction site. For safety reasons the use of any spark producing devices in the area has been prohibited. This has prevented the use of heaters in the trench and resultantly has stopped all joint work since about 2:00 p.m. on Wednesday, January 16. It is anticipated that normal construction work can proceed Monday or Tuesday, January 21 or 22.

b. Twenty-one (21) pieces of 42" pipe are in the trench. Seventeen (17) joints are either complete or partially complete.

c. Manhole 1-FF walls have been poured and stripped.

d. Excavation is now approximately 100' beyond manhole 1-CC.

2. Storage West of ACL

Temporary unloading facilities to "I" Street are targeted for completion by the end of the day on Friday, 01/18/85.

3. Dirt Removal

Testing of a dirt pile which includes concrete and asphalt pieces indicates some low level contamination. Disposal of this dirt may have to be handled as contaminated dirt.

The costs for handling and disposal of dirt are being reviewed.

4. Miscellaneous

a. Jim Becherle is assisting Chris Lotz.

b. Update of the schedule is still in progress.

c. Methods for maintaining sufficient heat in the trench for joint curing were discussed.

Gordon

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